

Claims

- 1- An *in vitro/ex vivo* method for the cultivation of connective tissue cells or progenitor cells thereof comprising the step of contacting said cells with a matrix comprising polysulphated alginate.
- 5 2- The method according to claim 1, wherein said matrix is suitable for the implantation into the human or animal body.
- 3- The method according to claim 1 or 2, wherein said matrix further comprises
10 nutrient media.
- 4- The method according to any one of claims 1 to 3, wherein said matrix further comprises unsulphated alginate.
- 15 5- The method according to any one of claims 1 to 4, wherein said polysulphated alginate and unsulphated alginate are present in a weight ratio of between 1:10 and 1:100.
- 6- The method according to any one of claims 1 to 5, wherein said cells are
20 connective tissue cells.
- 7- The method according to any one of claims 1 to 5, wherein said cells are chondrogenic.
- 25 8- The method according to claim 7, wherein said cells are chondrocyte precursor cells.
- 9- A matrix comprising polysulphated alginate and mammalian connective tissue cells or progenitor cells thereof.
- 30 10-The matrix of claim 9, wherein said cells are osteochondral cells.

- 11-The matrix of claim 10, wherein said cells are chondrogenic cells.
- 12-The matrix of claim 9, wherein said cells are mesenchymal stem cells.
- 5 13-The matrix of any one of claims 9 to 12, which further comprises nutrient media.
- 14-The matrix of any one of claims 9 to 13, wherein said polysulphated alginate is present in a concentration between 100 ng and 500 µg/ml.
- 10 15-The matrix of any one of claims 9 to 14, which further comprises unsulphated alginate.
- 16-A pharmaceutical composition comprising the matrix of any one of claims 9 to 15.
- 15 17-Use of matrix comprising polysulphated alginate in the production of a medicament for the treatment or prevention of osteochondral defects.
- 18-The use of claim 17, wherein said matrix further comprises chondrogenic cells.
- 20 19-A method for the treatment or prevention of osteochondral defects comprising administering to the osteochondral defect a matrix comprising a polysulphated alginate.
- 25 20-The method of claim 19, wherein said matrix further comprises connective tissue cells or progenitor cells thereof.
- 21-The method of claim 19, wherein said cells are osteochondral cells.
- 30 22-The method of claim 19, wherein said cells are chondrogenic cells.